BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Footpaths Roads and Footpath in Bhavi muneshwara temple main Road and sorrounding areas in ward No 8 Kodigehalli, Kodigehalli Sub Division.

Est Cost: =50.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRRB M200-13.1. Dismantling of existing structures like culverts, Bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceble material and stacking the serviceble material with all lifts complete as per specifications. II. By mechanical means, A. Cement concrete Grade M-15 & M-20 (P.No.137, I.No.18.20 of PW,P&IWTD SR 2016-17)								
	Road	Cum							
	1st Cross		1	30.00	4.50	0.15	20.25		
	2nd Cross		1	65.00	4.00	0.15	39.00		
	ORR to 12th c/s maruti nagar		1	125.00	5.00	0.15	93.75		
							153.00	466.20	**71328.60**
2	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Cross Road to Devinagar		2	110.00	0.60	0.40	52.80		
	1st Cross Bhavi muneshwara temple road		2.00	35.00	0.70	0.35	17.15		
	2nd Cross Bhavi muneshwara temple road		2.00	65.00	0.70	0.40	36.40		
	3rd Cross Bhavi muneshwara temple road		2.00	65.00	0.70	0.40	36.40		
	4th Cross Bhavi muneshwara temple road		2.00	105.00	0.70	0.40	58.80		
	5th Cross Bhavi muneshwara temple road		2.00	100.00	0.70	0.40	56.00		
	6th Cross Bhavi muneshwara temple road		2.00	85.00	0.70	0.45	53.55		
	7th Cross Bhavi muneshwara temple road		2.00	85.00	0.70	0.45	53.55		
	1st cross		2.00	105.00	0.70	0.45	66.15		
	2nd cross		2.00	105.00	0.70	0.45	66.15		
	3rd cross		2.00	75.00	0.70	0.40	42.00		
	ORR to 12th c/s maruti nagar		2.00	125.00	0.60	0.45	67.50		
	12th c/s marutinagar		2.00	95.00	0.60	0.45	51.30		
	c/s road in 12th cross		1.00	45.00	0.60	0.45	12.15		
	c/s road in 12th cross		2.00	75.00	0.70	0.45	47.25		
	Devi Nagar main Road								
	7th cross 0-110		2.00	110.00	0.65	0.50	71.50		
	6th cross 0-135		2.00	135.00	0.65	0.50	87.75		
	5th cross 0-95		2.00	95.00	0.65	0.50	61.75		
	4th cross 0-70 new drain		2.00	70.00	0.80	0.70	78.40		
	2nd cross 0-110		2.00	110.00	0.65	0.45	64.35		
							1080.90	186.92	**202041.83**
3	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	BS Slab cover	Sqm							
	Cross Road to Devinagar		2	30.00	1.20	--	72.00		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	1st Cross Bhavi muneshwara temple road		2	10.00	1.20	--	24.00		
	2nd Cross Bhavi muneshwara temple road		2	20.00	1.20	--	48.00		
	3rd Cross Bhavi muneshwara temple road		2	20.00	1.20	--	48.00		
	4th Cross Bhavi muneshwara temple road		2	25.00	1.20	--	60.00		
	5th Cross Bhavi muneshwara temple road		2	25.00	1.20	--	60.00		
	6th Cross Bhavi muneshwara temple road		2	20.00	1.20	--	48.00		
	7th Cross Bhavi muneshwara temple road		2	18.00	1.20	--	43.20		
	1st cross		2	25.00	1.20	--	60.00		
	2nd cross		2	25.00	1.20	--	60.00		
	3rd cross		2	20.00	1.20	--	48.00		
	ORR to 12th c/s maruti nagar		2	125	0.90	--	225.00		
	Consider 20% for missing and Damage Slabs						-159.24		
	12th c/s marutinagar		2.00	95.00	0.90	--	171.00		
	Consider 30% for missing and Damage Slabs Marutinagar						-51.30		
	c/s road in 12th cross		2.00	75.00	0.90	--	135.00		
	Devi Nagar main Road								
	7th cross 0-110		2	45	1.80	--	162.00		
	6th cross 0-135		2	55	1.80	--	198.00		
	5th cross 0-95		2	40	1.80	--	144.00		
	2nd cross 0-110		2	50	1.80	--	180.00		
							1575.66		
	Consider 20% for missing and Damage Slabs Devinagar						-163.80		
							1636.86	80.56	**131865.44**
4	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.2 of PW, P&IWTD SR 2016-17)								
	For BS Slab Drain / Missing	Sqm					163.80		
	4th cross 0-70 new drain		2	70	1.80	--	252.00		
							415.80	665.68	**276789.74**
5	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 10cms thick (P.No.25, I.No.5.31.2 of PW, P&IWTD SR 2016-17)								
	For BS Slab Drain / Missing	Sqm					210.54		
							210.54	825.74	**173851.30**
6	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	ORR to 12th c/s maruti nagar								
	c/s road in 12th cross		1.00	25.00	1.50	0.25	9.38		
	UGD cut in 6th cross		1.00	80.00	1.50	0.30	36.00		
	UGD cut in 4th cross		1.00	30.00	1.50	0.30	13.50		
	Bad reaches		5.00	2.00	1.60	0.30	4.80		
			4.00	1.80	0.90	0.30	1.94		
			6.00	1.50	0.80	0.30	2.16		
			2.00	0.90	1.20	0.30	0.65		
			13.00	1.50	1.00	0.30	5.85		
							74.28	148.76	**11049.45**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
7	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Road portion	Cum							
	ORR to 12th c/s maruti nagar		1.00	125.00	5.00	0.10	62.50		
	1st Cross		1.00	30.00	4.50	0.10	13.50		
	2nd Cross		1.00	65.00	4.00	0.10	26.00		
							102.00	5348.76	**545573.52**
8	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 ReaffirmecF2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. M20 (at 300Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.43cum) ((P.No.177, I.No.22.6.2 of PW,P&IWTD SR 2016-17)								
	Road portion	Cum							
	ORR to 12th c/s maruti nagar		1.00	125.00	5.00	0.10	62.50		
	1st Cross		1.00	30.00	4.50	0.10	13.50		
	2nd Cross		1.00	65.00	4.00	0.10	26.00		
							102.00	6217.96	**634231.92**
9	Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.(P.No.177, I.No.22.7 of PW, P&IWTD SR 2016-17)								
	Road portion	Sqm							
	ORR to 12th c/s maruti nagar		1.00	125.00	5.00	--	625.00		
	1st Cross		1.00	30.00	4.50	--	135.00		
	2nd Cross		1.00	65.00	4.00	--	260.00		
							1020.00	95.40	**97308.00**
10	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	UGD cut in 6th cross		1.00	80.00	1.50	0.25	30.00		
	UGD cut in 4th cross		1.00	30.00	1.50	0.25	11.25		
	Bad reaches		8.00	2.00	1.60	0.25	6.40		
			9.00	1.80	0.90	0.25	3.65		
			11.00	1.50	0.80	0.25	3.30		
			8.00	0.90	1.20	0.25	2.16		
			13.00	1.50	1.00	0.25	4.88		
							61.63	1768.08	**108966.77**
11	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	UGD cut in 6th cross		1.00	80.00	1.50	--	120.00		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	UGD cut in 4th cross		1.00	30.00	1.50	--	45.00		
	Bad reaches		8.00	2.00	1.60	--	25.60		
			9.00	1.80	0.90	--	14.58		
			11.00	1.50	0.80	--	13.20		
			8.00	0.90	1.20	--	8.64		
			13.00	1.50	1.00	--	19.50		
							246.52	29.68	**7316.71**
12	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Cross Road to Devinagar		1.00	110.00	4.50	--	495.00		
	4th Cross Bhavi muneshwara temple road		1.00	105.00	3.50	--	367.50		
	5th Cross Bhavi muneshwara temple road		1.00	100.00	4.20	--	420.00		
	6th Cross Bhavi muneshwara temple road		1.00	85.00	5.00	--	425.00		
	1st cross		1.00	105.00	3.80	--	399.00		
	2nd cross		1.00	105.00	4.50	--	472.50		
	3rd cross		1.00	75.00	4.50	--	337.50		
	c/s road in 12th cross		1.00	75.00	5.80	--	435.00		
	Devi Nagar main Road								
	7th cross 0-110		1.00	110.00	6.15	--	676.50		
	6th cross 0-135		1.00	135.00	6.30	--	850.50		
	5th cross 0-95		1.00	95.00	6.00	--	570.00		
	4th cross 0-70		1.00	70.00	6.00	--	420.00		
	2nd cross 0-110		1.00	110.00	5.50	--	605.00		
	Deduct prime coat						**6473.50**		
							-246.52		
							6226.98	3.18	**19801.80**
13	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying DBM/ Profile Correction	Sqm							
	Cross Road to Devinagar		1.00	20.00	2.50	--	50.00		
	4th Cross Bhavi muneshwara temple road		1.00	15.00	2.40	--	36.00		
	5th Cross Bhavi muneshwara temple road		1.00	20.00	2.10	--	42.00		
	6th Cross Bhavi muneshwara temple road		1.00	20.00	2.15	--	43.00		
	1st cross		1.00	20.00	2.00	--	40.00		
	2nd cross		1.00	20.00	2.40	--	48.00		
	3rd cross		1.00	20.00	1.70	--	34.00		
	c/s road in 12th cross		1.00	25.00	1.60	--	40.00		
	For Laying BC								
	Cross Road to Devinagar		1.00	110.00	4.50		495.00		
	4th Cross Bhavi muneshwara temple road		1.00	105.00	3.50		367.50		
	5th Cross Bhavi muneshwara temple road		1.00	100.00	4.20		420.00		
	6th Cross Bhavi muneshwara temple road		1.00	85.00	5.00		425.00		
	1st cross		1.00	105.00	3.80		399.00		
	2nd cross		1.00	105.00	4.50		472.50		
	3rd cross		1.00	75.00	4.50		337.50		
	c/s road in 12th cross		1.00	75.00	5.80		435.00		
	Devi Nagar main Road								
	7th cross 0-110		1.00	110.00	6.15		676.50		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	6th cross 0-135		1.00	135.00	6.30		850.50		
	5th cross 0-95		1.00	95.00	6.00		570.00		
	4th cross 0-70		1.00	70.00	6.00		420.00		
	2nd cross 0-110		1.00	110.00	5.50		605.00		
	Approach to cross roads		8.00	3.00	5.00		120.00		
							6926.50	12.72	**88105.08**
14	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.163 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								
	For Laying DBM/ Profile Correction	Cum							
	Cross Road to Devinagar		1.00	20.00	2.50	0.05	2.50		
	4th Cross Bhavi muneshwara temple road		1.00	15.00	2.40	0.05	1.80		
	5th Cross Bhavi muneshwara temple road		1.00	20.00	2.10	0.05	2.10		
	6th Cross Bhavi muneshwara temple road		1.00	20.00	2.15	0.05	2.15		
	1st cross		1.00	20.00	2.00	0.05	2.00		
	2nd cross		1.00	20.00	2.40	0.05	2.40		
	3rd cross		1.00	20.00	1.70	0.05	1.70		
	c/s road in 12th cross		1.00	25.00	1.60	0.05	2.00		
	UGD cut in 6th cross		1.00	80.00	1.50	0.05	6.00		
	UGD cut in 4th cross		1.00	30.00	1.50	0.05	2.25		
	Bad reaches		8.00	2.00	1.60	0.05	1.28		
			9.00	1.80	0.90	0.05	0.73		
			11.00	1.50	0.80	0.05	0.66		
			13.00	1.50	1.00	0.05	0.98		
							28.54	7036.28	**200843.58**
15	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	Cross Road to Devinagar		1.00	110.00	4.50	0.04	19.80		
	4th Cross Bhavi muneshwara temple road		1.00	105.00	3.50	0.04	14.70		
	5th Cross Bhavi muneshwara temple road		1.00	100.00	4.20	0.04	16.80		
	6th Cross Bhavi muneshwara temple road		1.00	85.00	5.00	0.04	17.00		
	1st cross		1.00	105.00	3.80	0.04	15.96		
	2nd cross		1.00	105.00	4.50	0.04	18.90		
	3rd cross		1.00	75.00	4.50	0.04	13.50		
	c/s road in 12th cross		1.00	75.00	5.80	0.04	17.40		
	Devi Nagar main Road								
	7th cross 0-110		1.00	110.00	6.15	0.04	27.06		
	6th cross 0-135		1.00	135.00	6.30	0.04	34.02		
	5th cross 0-95		1.00	95.00	6.00	0.04	22.80		
	4th cross 0-70		1.00	70.00	6.00	0.04	16.80		
	2nd cross 0-110		1.00	110.00	5.50	0.04	24.20		
	Approach to cross roads		8.00	3.00	5.00	0.04	4.80		
							263.74	8013.60	**2113506.86**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
16	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	1280.00	0.10	--	256.00		
							256.00	542.72	**138936.32**
								Total Construction Cost	**4821516.924**
17	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**2974.99**	27.00	**80325.00**
	Waste = 263.74 X 141 X 8 / 100 = 2974.99								
18								**Cost towards Preparation of DPR LS**	**48216.00**
19								**Cost towards PMC / Third Party inspection LS**	**48216.00**
								Sub Total	**4998273.92**
20								**Miscellaneous and rounding off**	**1726.08**
								Total	**5000000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

For Tejus Consultants

Assistant Engineer

Assistant Executive Engineer

Executive Engineer

KEY MAP – 17. BHAVI MUNESHWARA TEMPLE ROAD